Title (en)

Gate turn-off thyristor.

Title (de)

Thyristor mit Löschsteuerung.

Title (fr)

Thyristor à blocage par la gâchette.

Publication

EP 0022355 A1 19810114 (EN)

Application

EP 80302258 A 19800703

Priority

JP 8496479 A 19790706

Abstract (en)

The GTO thyristor consists of a semiconductor substrate 11 of disc shape which has, in sequence, an emitter layer 16 on the cathode side, a second base layer 15, a first base layer 13, 14, and an emitter layer 12 on the anode side. The emitter layer on the anode side is short-circuited by an emitter short-circuiting layer 13. The emitter layer 16 on the cathode side is divided into a plurality of radially extending elongate units, and the emitter layer 12 on the anode side is likewise divided into elongate units which are provided in the portions located at the areas of projection of the units of the layer 16 onto the anode side. The emitter short-circuiting layer 13 thus forms a plurality of wedge-shaped regions between the said areas of projection of the units of the layer 16. A thyristor of high current capacity and quick turn-off is thus achieved because the varying distance from the central lead wire 20 of the control electrode 18 is compensated by the varying width of the said wedge shaped regions of the emitter short circuit layer 13.

IPC 1-7

H01L 29/743

IPC 8 full level

H01L 29/08 (2006.01); **H01L 29/74** (2006.01); **H01L 29/744** (2006.01)

CPC (source: EP US)

H01L 29/0834 (2013.01 - EP US); **H01L 29/74** (2013.01 - EP US); **H01L 29/744** (2013.01 - EP US)

Citation (search report)

- DE 2055353 B2 19770922
- DE 2064110 A1 19710708 - WESTINGHOUSE ELECTRIC CORP
- US 3504242 A 19700331 - WOLLEY ELDEN D
- FR 2185860 A1 19740104 - SONY CORP [JP]
- EP 0009367 A1 19800402 - HITACHI LTD [JP]
- GB 1314985 A 19730426 - WESTINGHOUSE ELECTRIC CORP

Cited by

EP0066850A3; EP0121068A1; EP0215489A3; EP0270975A3; EP0151019A3; DE3722425A1; US4868625A; DE3742638A1; EP0077930A3; DE3509745A1; US4710792A; EP0364354A1; FR2638022A1; US5146305A; EP0391337A3; EP0137951A1; EP0066721A3

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CH DE FR GB NL SE

DOCDB simple family (publication)

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